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ABSTRACT

A study was conducted to estimate the economic impact of the State University of New York's (SUNY's) community colleges on their individual service areas, and, as a system, on the state as a whole. The methodological model used in the study examined three major expenditure components to estimate direct economic impact: college budgetary expenditures, employee expenditures, and student expenditures. These three streams of economic activity were calculated, and an economic mulitiplier was applied to estimate additional business volume resulting from the direct expenditures. The model also included an estimate of the additional jobs created by economic activity. An analysis of the 1986-87 data provided by each SUNY college resulted in the following findings regarding the statewide impact of the community colleges: (1) nearly $700 million was added to the state's economy as a direct result of spending by the SUNY community colleges, their students, and their employees; (2) a business volume or economic impact of nearly $1.5 billion was generated by these expenditures; (3) the ratio of total economic impact to total revenues from all sources was 2.5 to 1; (4) the ratio of statewide economic impact to state aid revenue was 7.6 to 1; and (5) nearly 42,000 jobs were attributable to the existence and expenditures of SUNY's community colleges. The survey instrument is included. (EJV)

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The Economic Impact

of SUNY's Community Colleges on the State of New York

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The mission of the community colleges in New York State is to provide educational opportunities for the citizens of the state, primarily those residing in the respective service areas of the colleges. They offer associate degree programs that encompass the first two years of a baccalaureate education, and occupational and technical programs designed to lead directly into employment for both full-time and part-time students. They address a large variety of learning needs and interests through adult and continuing education programs and provide targeted courses and services for community agencies and local firms and their employees.

The colleges are, by law and operation, truly community colleges since they have local boards of trustees and are partly funded by local tax revenues. They are teaching institutions, serving the widest range of student needs through open admissions and developmental programs. They are committed to access, life-long learning and community service. During 1986–87, the 30 SUNY community colleges enrolled nearly 170,000 students in credit programs, over 63% of all lower division students in the State University. In addition, there were nearly 142,000 non-credit course registrations during the summer and fall semesters.

The community colleges do more than provide access to low cost higher education and quality service. They have an economic impact on their communities and, as a system, on the state. Some colleges have done local impact studies, demonstrating their value as an economic entity to their sponsor. Since economic development is a priority of all segments of state government, and the community colleges are active in delivering education and training tailored to the needs of local business and industry, it is appropriate that the community colleges examine the impact they have in economic terms.

THE STUDY

In the fall of 1987 a research project was initiated to estimate the economic impact of the SUNY community colleges on the State of New York. An advisory committee of local college administrators and SUNY Central Administration staff was established to work with the project staff, Dr. Gene M. Winter and Dr. LaVerna M. Fadale from the Two-Year College Development Center, University at Albany.

After consideration of the economic impact models available in the literature, the so-called Ryan-New Jersey model[1] was selected because of its efficiency in achieving the goals of the project through collection of a standard set of data readily available from each college. The advisory committee also decided on a single rather than multi-year study.

The Ryan-New Jersey model uses three major expenditure components to estimate direct economic impact.

- college expenditures
- employee expenditures
- student expenditures

These three streams of economic activity are calculated, and an economic multiplier is applied to estimate the additional business volume or indirect economic impact that results from the direct expenditures. A U.S. Department of Commerce publication recommends a multiplier of 2.1 for higher education expenditures in New York State.[2]

The model also includes an estimate of the additional jobs created by the economic activity. The U.S. Department of Commerce estimates that 40.1 jobs are created for each million dollars of direct expenditure.

[1] Ryan, G. Jeremiah, *The Direct Economic Impact of New Jersey's Community Colleges*, ED 233774, 1983.

[2] U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System*, 1986.

FINDINGS OF THE STUDY

The SUNY community colleges generate an economic impact in the state:

- **that is 7.6 times the aid received from the state**
- **that accounts for the creation of 41,975 jobs.**

The findings of a ratio of economic impact to state aid of almost 8 to 1 is very conservative compared to results of other state studies. The differences are mainly caused by our use of more conservative multipliers. The data demonstrate that the SUNY community colleges can be viewed as an economic entity, one that contributes to economic development much like other segments of the economy.

However, the more important benefits, an enhanced life style and increased earning power associated with increased levels of education, have not been included in this study. The investment in developing human capital provides the most important return to the state. Making higher education and technical skill training readily available to all citizens of New York State remains the main job of the community colleges. That they also have a significant economic impact further reinforces the wisdom of public investment in this unique educational system.

ECONOMIC IMPACT ON THE STATE OF NEW YORK

The economic impact of SUNY's community colleges on the economy of New York State in 1986–87 was estimated to be

Student Expenditures	$387,324,765
College Expenditures	$181,588,181
Employee Expenditures	$122,017,893
Direct Economic Impact of SUNY's Community Colleges	**$690,930,839**

Nearly 700 million dollars of the state's economy was a direct result of spending by SUNY community colleges, their students and their employees.

Multiplier

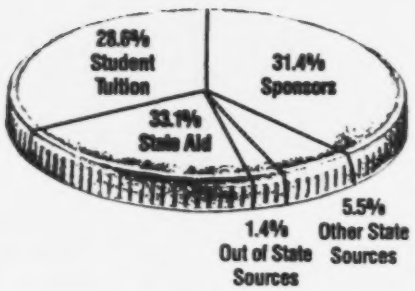
A factor provided by the U.S. Department of Commerce used to account for the additional business volume that results from the re-spending that occurs following the original expenditure.

X 2.1

Total Economic Impact of SUNY's Community Colleges	**$1,450,954,761**

A business volume of nearly $1.5 billion was generated by the expenditures of SUNY community colleges, their students and their employees.

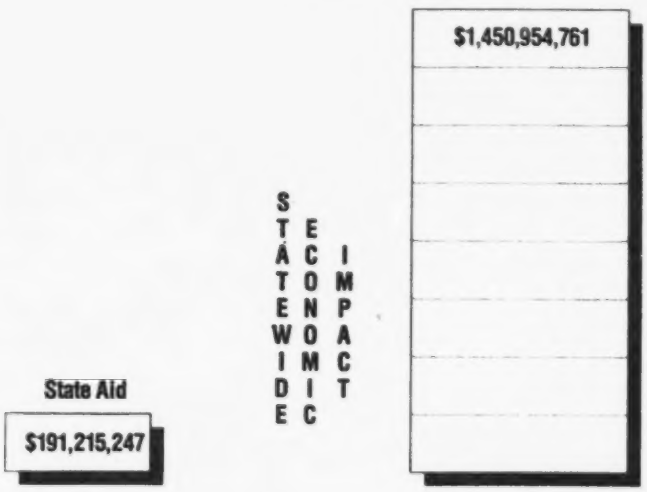
SUNY Community College Revenues for FY 1986-87 **$578,248,533**



Most of the support for community colleges comes from three sources: state aid, local sponsor revenue and student tuition. State aid amounted to $191,215,247.

The ratio of state aid to statewide impact $\left[\frac{\$\ 191,215,247}{\$1,450,954,761}\right]$ is 1 to 7.6

RELATIONSHIP OF TOTAL STATEWIDE ECONOMIC IMPACT TO STATE AID



41,975 jobs are attributable to SUNY's Community Colleges

The employment opportunities created by the system's existence and its expenditures were:

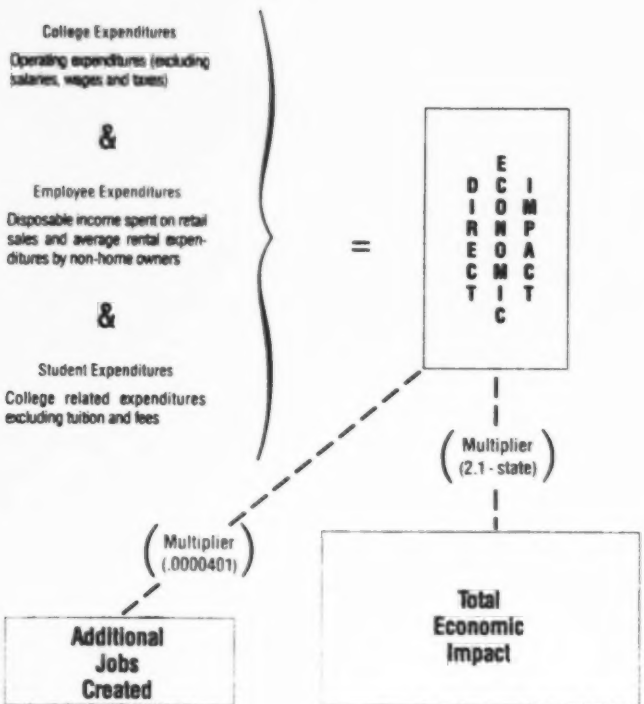
FTE* Existing Jobs	14,269
Estimated Jobs Created in New York State[3]	27,706
Total Employment	**41,975**

*Full time equivalent

The employment opportunities created by the system's existence and its expenditures were estimated by using the multiplier of 40.1 for each million dollars of direct economic impact.[3] This results in an estimated 27,706 jobs created in New York State. When added to the 14,269 full-time equivalent jobs already existing in the colleges, the result is a total of 41,975 employment opportunities. Stated another way, nearly 42,000 jobs across the state are attributable to SUNY's community colleges.

[3] U.S. Department of Commerce publication, *RIMS II Handbook*.

Components of the Economic Impact Model



LIMITATIONS

Any study of this type only provides estimates of the real economic impact that community colleges have on a state. This model does not include some components that others have used, such as expansion of the credit base of local banks due to college-related deposits, expenditures by visitors to college-related events, and college employee investments in real property (home ownership). Nor does the model include state and local taxes paid by employees, increases in sales tax revenue due to college-related expenditures, and estimates of tax revenues foregone because of college property being tax-exempt.

The exclusions, while simplifying data collection, also insure underestimation of the actual economic impact. This tendency is also reinforced by the use of 1980 census data to estimate rental rates paid and the use of 1984 data to estimate non-housing expenditures as a percent of disposable income.

THE ECONOMIC IMPACT OF THE SUNY COMMUNITY COLLEGES ON THE STATE OF NEW YORK

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Many educators have provided valuable assistance during the course of the project.

From the first questions on basic approach through considerations of reporting formats, the project was fortunate to have insightful advice and guidance from an Advisory Committee whose members are listed below. We also appreciate the time and effort of the President and designated staff at each community college for responding to the request for local information which became the building blocks of the research. The assistance of George Anker, Central Administration, with the data collection process is also appreciated. Finally, the project became a reality due in large measure to the leadership of Dr. Thomas S. Kubala, Deputy to the Chancellor for Community Colleges.

We sincerely hope that the findings will be useful to community college educators and policy-makers as they continually consider the benefits of public investment in SUNY's community colleges.

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EXECUTIVE SUMMARY

SUNY community colleges provide citizens of New York State easy access to quality higher education opportunities and services. However, the community colleges also have an economic impact on their sponsor areas and, as a system, on the state as a whole. The goal of this project was to estimate this impact.

The project utilized the economic impact model developed and used in New Jersey. Minor adaptations were made regarding choice of multipliers and expenditure factors. Using 1986-87 data from each community college, calculations of each component of the model were performed resulting in the following findings.

The SUNY community colleges generate an economic impact in the state as follows:

> Nearly 700 million dollars of the state's economy is a direct result of spending by the SUNY community colleges, their students and their employees.
>
> A business volume or economic impact of nearly $1.5 billion was generated by expenditures of SUNY community colleges, their students and their employees.
>
> The ratio of total economic impact to total revenues from all sources is 2½ to 1.
>
> The ratio of statewide economic impact to state aid revenue is 7.6 to 1.
>
> Nearly 42,000 jobs are attributable to the existence and expenditures of SUNY's community colleges.

The SUNY community colleges generate an average economic impact in their sponsor areas as follows:

> 89% of expenditures by community colleges, faculty and students is within their respective sponsor areas.
>
> Student expenditures account for 63%, college expenditures for 19% and employee expenditures for 18% of the direct economic impact.
>
> On average, nearly $20.5 million was spent by the community college, its employees and students within the sponsor area.

On average, a business volume of nearly $37 million was generated within a sponsor area by the expenditures of the college, its students and employees.

On average, the ratio of total economic impact to each dollar of sponsor revenue is 6 to 1.

On average, for each existing job at a community college, two additional jobs are created in the sponsor area.

The findings demonstrate that the SUNY community colleges can be viewed as an economic entity, one that contributes to economic development much like other segments of the economy. However, the more important benefits, an enhanced life style and increased earning power associated with increased levels of education, were not included. The investment in developing human capital provides the most important return to the citizens of the state. Making higher education and technical skill training readily available to all citizens of New York State remains the main job of SUNY's community colleges. That they also have a significant economic impact further reinforces the wisdom of public investment in this unique educational system.

THE ECONOMIC IMPACT OF THE SUNY COMMUNITY COLLEGES ON THE STATE OF NEW YORK

INTRODUCTION

The mission of the community colleges in New York State is to provide educational opportunities for the citizens of the state, primarily those residing in the respective service areas of the colleges. They offer associate degree programs that encompass the first two years of a baccalaureate education, and occupational and technical programs designed to lead directly into employment for both full-time and part-time students. They also meet a large variety of learning needs and interests through adult and continuing education programs and provide targeted courses and services for community agencies and local firms and their employees.

The colleges are, by law and operation, truly community colleges since they have local boards of trustees and are partly funded by local tax revenues. They are teaching institutions, serving the widest range of student needs through open admissions and developmental programs. They are committed to access, life-long learning and community service. During 1986-87, the 30 SUNY community colleges enrolled nearly 170,000 students in credit programs, over 63% of all lower division students in the SUNY system. In addition, there were nearly 142,000 non-credit course registrations during the summer and fall semesters.

However, the colleges do more than provide affordable access to higher education and service to their communities. They have an economic impact on their communities and, as a system, on the state. Some colleges have done local impact studies, demonstrating their value as an economic entity to their sponsor. Since economic development is a priority of all segments

of state government, and the community colleges are active in delivering education and training tailored to the needs of local business and industry. It is appropriate that the colleges as a system examine the impact they have in economic terms.

METHODOLOGY

Under the leadership of Dr. Thomas S. Kubala, Deputy to the Chancellor for Community Colleges, a research project was initiated to estimate the economic impact of the SUNY community colleges on the State of New York. An advisory committee of local college administrators and SUNY Central Administration staff was established to work with the project staff, Dr. Gene M. Winter and Dr. LaVerna M. Fadale from the Two-Year College Development Center, University at Albany, State University of New York.

The literature on economic impact studies begins with the work of Caffrey and Isaacs for the American Council on Education and includes statewide studies done in Illinois, Virginia, Maryland, Washington, New Jersey and Kansas. In addition, a number of local studies in New York State colleges were reviewed. After consideration of the economic impact models available in the literature and priorities set forth for this project, the Ryan-New Jersey model was selected because of its efficiency in achieving project goals through collection of standard data readily available at each college.(1) The advisory committee also recommended the study be based on a single year rather than multi-year expenditures.

A data collection instrument was adapted from the New Jersey handbook materials, reviewed by the advisory committee, finalized and mailed to the 30 SUNY community colleges in November 1987.(2) A copy of this instrument constitutes Appendix A. Data were analyzed and statewide publications prepared during January and February.

The Ryan-New Jersey Model

The pattern for most economic impact studies done locally or in other states has been the Caffrey and Isaacs model developed for use by colleges and universities in 1971.(3) The basic model used in this study was developed by Ryan for determining both local and statewide economic impact estimates of New Jersey's community colleges. Ryan's model was designed to overcome some of the complexity of the Caffrey and Isaacs procedures, particularly the necessity for local surveys of college employees and students.(1) Applications of this model in New Jersey and Kansas have demonstrated the model's utility.

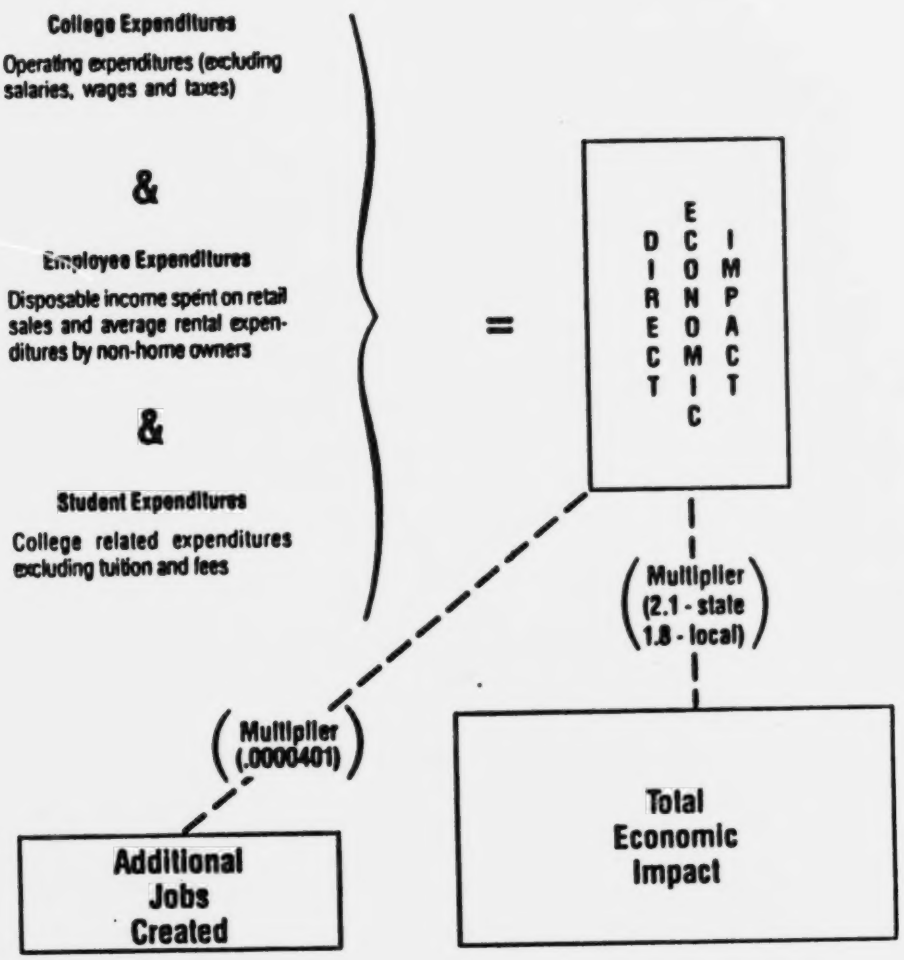
The Ryan-New Jersey model uses three major expenditure components to estimate direct economic impact:

...college budgetary expenditures
...employee expenditures
...student expenditures

These three streams of economic activity are calculated and an economic multiplier is applied to estimate additional business volume, indirect economic impact, that results from the direct expenditures. The model also includes an estimate of the additional jobs created by the economic activity. Figure 1 presents the model and its components. The multipliers included are those used in this study. Their choice is discussed later in the report.

Figure 1

Components of the Economic Impact Model



Model Components and Definitions. The three key components used in the economic impact model are detailed below.

1) College Expenditures - This component consisted of all operating expenditures, including capital expenditures, made by the college except for salaries and wages, taxes, and internal transfers that were not subsequently expended externally. The sources of these data were the appropriate 1986-87 fiscal year college financial reports. Student activity expenditures were also included under this component.

   In order to determine impacts to both the sponsor area and the state, each college was asked to provide an estimate of the percentage of expenditures spent within their sponsor area, within the state and out of state. The data collection instrument provided a method for deriving these estimates. Multiplying expenditures by the appropriate percentage results in an estimate of direct expenditures.

2) Student Expenditures - Each college reported numbers of full-time and part-time students. Estimates of their expenditures as enrolled college students were made using financial aid schedules to determine nine-month living and book allowances for a single, dependent student, full-time and part-time, living at home. Tuition and fee amounts were not included.

3) College Employee Expenditures - Each college was asked for the numbers of full, part-time, and full-time equivalent employees living in the sponsor area, in the state but outside the sponsor area, and out-of-state. Employee disposable income was reported by each college using appropriate payroll records. Taxes and mandatory retirement deductions were not included.

The average percent of disposable income spent in each county (sponsor area) was determined by dividing "Total Retail Sales," (non-housing items) by "Effective Buying Income" on a county-by-county basis (TRS ÷ EBI = Non-housing Expenditure). Both data elements were identified in the 1987 Survey of Buying Power in the journal, Sales and Marketing Management.(4) Effective Buying Income is defined as disposable personal income. College employees living in the sponsor county(ies), and in the state, multiplied by the average non-housing percentage derived above, resulted in estimates of non-housing expenditures by employees. (See Appendix B, Employee Factor Reference Chart.)

Housing expenditures by employees who rent were estimated by using census data from the New York State Statistical Yearbook to determine the percentage of renter-occupied housing units and the median contract rent paid for each county.(5) The derived numbers were then applied to the employee numbers. (See Appendix B, Employee Factor Reference Chart.)

The Multiplier

The total of college, employee and student expenditure estimates become the direct economic impact. An indirect impact is also a fixture of economic impact studies. Each actual dollar spent is subsequently re-spent several times in the economy as providers of goods or services pay employees and, in turn, they purchase other goods or services. Economists use a multiplier to estimate this recycling effect. The following paraphrases a description of this effect:

> After the first dollar transaction, 75¢ may be re-spent in the state with taxes and leakage to other geographic regions accounting for the other 25¢. The next cycle may have 2/3 of the 75¢ or 50¢ re-spent in the state, and perhaps 25¢ spent again on a subsequent transaction. This re-spending

> results in a total in-state impact of $1.50 more than the original dollar, or a total direct and indirect economic impact of $2.50.(6)

Previous economic impact studies have used multipliers ranging from 1.5 to 3.0 for local college studies and 2.5 or higher for statewide studies. The studies done in New Jersey and Kansas both used 2.0 to estimate local impact and 2.5 for statewide impact. Following discussions with research staff of the New York State Department of Economic Development, 2.1 was selected for use as the state impact multiplier. This figure was recommended as the appropriate New York State multiplier for educationally-related expenditures by a U.S. Department of Commerce publication.(7)

Conventional wisdom deems the statewide multiplier to be somewhat higher than a regional multiplier, due to an assumption of less leakage during subsequent re-spending cycles within a larger geographic area. After discussions with staff of the State Department of Economic Development, the multiplier of 1.8 was chosen to estimate local college indirect impact; it has been used by several local college studies and compares favorably to a regional multiplier recently calculated for one New York State region (Long Island, 1.89) by the U.S. Department of Commerce, Bureau of Economic Analysis. Both local and state level choices of multipliers reflect the project's purposeful conservatism towards estimation of impact.

Employment Opportunities Created

The existence of a college carries with it the necessity for creation of a number of various jobs to carry out the functions of the college. In addition, expenditures by the college, its students and employees, increase economic activity which in turn result in the creation and support of additional jobs. Caffrey and Isaacs suggested that a coefficient of .00007

to .00009, multiplied by the direct expenditure, estimates the number of new jobs created by college-related expenditures. The more conservative coefficient, .00007 or 70 jobs per million dollars of direct expenditure has been used by many studies.

The U.S. Department of Commerce handbook for regional input-output analysis identifies multipliers for all industries for all states. Their model determined that 40.1 new jobs are created for each million dollars of output in education and miscellaneous industries in New York State. Because of the currency of this multiplier and its more conservative result compared to the Caffrey and Isaacs figure, this study used .0000401 as the employment multiplier.

Limitations of the Study

Any study of this type only provides estimates of the real economic impact that community colleges have on a state. The Ryan-New Jersey model does not include some components that various adaptations of the Caffrey and Isaacs model have used, such as expansion of the credit base of local banks due to college-related deposits, expenditures by visitors to college-related events, and college employee investments in real property (home ownership). Nor does the model include state and local taxes paid by employees, increases in sales tax revenues due to college-related expenses, and estimates of tax revenue foregone because of college property being tax-exempt.

The exclusions, while overcoming the necessity of local surveys at each college, also insure underestimation of the actual economic impact. This tendency is also reinforced by the use of 1980 census data to estimate housing expenditures by renters in each county.

The purpose of this study is to show a reasonable and defensible impact of the colleges as an economic entity, not to arrive at an optimum

estimate of their economic value. It must be remembered that the most important mission of community colleges is to provide education and training to the citizens of the state.

FINDINGS: ECONOMIC IMPACT IN THE STATE

Using data provided by the community colleges, calculations were made following the model as detailed in Appendix C. The economic impact of the SUNY community colleges on the economy of New York State in 1986-87 was estimated to be:

College Expenditures	$387,324,765
Employee Expenditures	$122,017,893
Student Expenditures	$181,588,181
DIRECT ECONOMIC IMPACT OF SUNY COMMUNITY COLLEGES	$690,930,839

Nearly 700 million dollars of the state's economy is a direct result of spending by the SUNY community colleges, their students and their employees.

The largest component of the direct economic impact is student expenditures which account for over half (56%) of the total. College non-salary expenditures comprise 26% of the impact and employee expenditures account for 18%.

In order to account for the additional business volume that results from respending that occurs following the original expenditure, the multiplier of 2.1 was applied to the total direct impact with the following result.

TOTAL ECONOMIC IMPACT OF SUNY COMMUNITY COLLEGES	$1,450,954,761

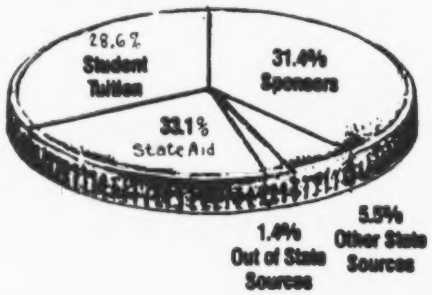
A business volume of nearly $1.5 billion was generated by the expenditures of SUNY community colleges, their students and employees in 1986-87.

Community College Revenues. Most of the support for community colleges comes from three sources: student tuition, state aid and local sponsor. The amounts and relationships are graphically presented in Figure 2.

Figure 2

SUNY COMMUNITY COLLEGE REVENUES FOR 1986-1987 $578,248,533

Student Tuition	$165,538,961
State Aid	$191,215,247
Sponsor and Chargeback Revenue	$181,678,987
Other State Sources	$31,812,051
Out-of-State SOurces	$8,003,287

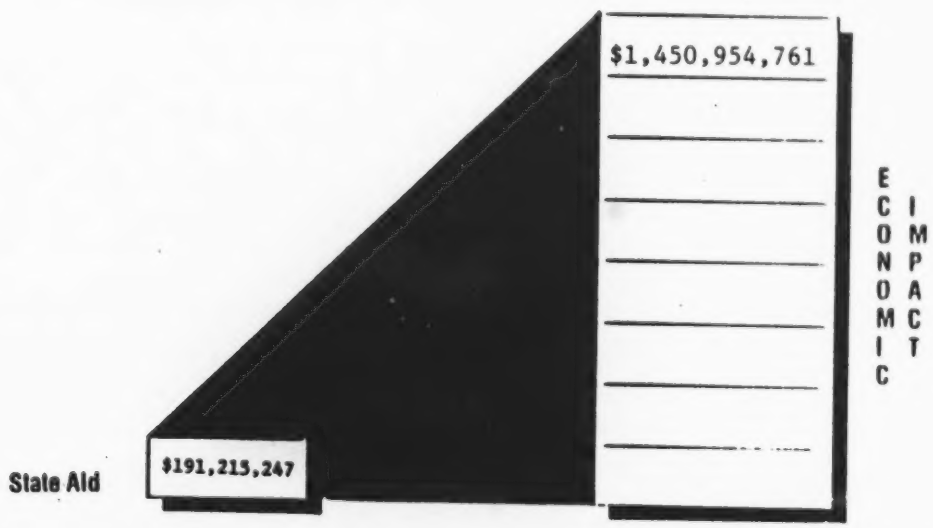


When a comparison of revenues ($578,248,533) is made to total economic impact ($1,450,954,761), the result is a finding that each dollar of total revenue has an economic impact of 2½ to 1.

When comparing total economic impact to only state aid revenue, the relationship is a ratio of 7.6 to 1 as illustrated in Figure 3.

Figure 3

RELATIONSHIP OF STATE AID TO TOTAL ECONOMIC IMPACT



Job Opportunities. The employment opportunities created by the system's existence and its expenditures were estimated by using the multiplier of 40.1 for each million dollars of direct economic impact. This results in an estimated 27,706 jobs created in New York State. When added to the 14,269 full-time equivalent jobs already existing in the colleges, the result is a total of 41,975 employment opportunities. Stated another way, nearly 42,000 jobs across the state are attributable to SUNY's community colleges.

FINDINGS: AVERAGE ECONOMIC IMPACT ON SPONSOR AREAS

The model was also used to estimate the economic impact of each SUNY community college (N=30) on its sponsor area.* Calculations were performed as outlined in Appendix D. Of the total in-state direct expenditures by community colleges, their faculty and their students, 89%, or almost $614 million, is spent within their respective sponsor areas. Listed below are average expenditures within a community college sponsor area:

Average College Expenditures	$3,848,573
Average Student Expenditures	$14,943,414
Average Employee Expenditures	$3,671,456
AVERAGE DIRECT ECONOMIC IMPACT	$20,463,443

On average, nearly $20.5 million was spent by a community college, its employees and its students, within its sponsor area. Of these average expenditures, student expenditures account for 63% of the economic impact on sponsor areas. College expenditures account for 19% and employee expenditures account for 18% of the direct economic impact in sponsor areas.

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*Because of missing data from two community colleges, estimates were made based on data available from Central Administration and patterned after community colleges of similar size, location and characteristics.

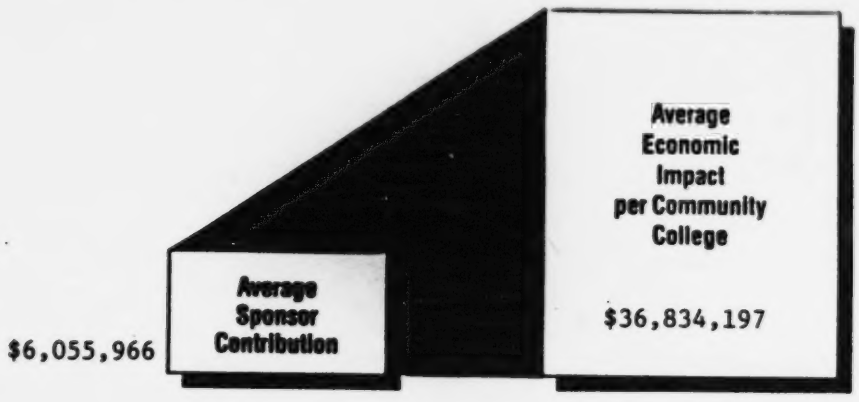
MULTIPLIER: Based on information from Department of Economic Development and U.S. Department of Commerce	X	1.8
AVERAGE TOTAL LOCAL ECONOMIC IMPACT		$36,834,197

On average, a business volume of nearly $37 million was generated within a sponsor area by the expendituers of a college, its employees, and its students.

Sponsor Contributions. Sponsor contributions included local tax and chargeback revenues. Because of size and location, local sponsor contributions ranged from $1.2 million to $28.3 million dollars. The average sponsor revenue was calculated as $6,055,966. On average the ratio of each sponsor dollar to total economic impact is $1.00 to $6.08.

Figure 4

RELATIONSHIP OF AVERAGE SPONSOR AID TO AVERAGE LOCAL ECONOMIC IMPACT



Job Opportunities. The existence and expenditures of a community college within a sponsor area results in the creation of new jobs as a result of the economic activity. When the employment multiplier is applied to the average direct economic impact, the result is an estimate of 821 jobs created, on average, in each sponsor area. Each college,

APPENDIX D

CALCULATIONS OF ECONOMIC IMPACT - SPONSOR COUNTY(IES)

Data Items	Procedures	Estimate
A. Student Activity expenditures spent in County	Found by applying percentage computed in #3a to total reported in #2 (on survey).	$_____
B. College expenditures spent in County	Found by applying percentage computed in #3a to total reported in #1 (on survey).	$_____
C. Total in-County expenditures by the College	Computed by adding A and B.	$_____
D. Employees non-housing expenditures	Obtained as follows: Disposable Income (#6 survey) X Percentage of in-County Staff (#5 survey) X Average Percentage of non-housing in-County expenditures (Column A - Chart I)	$_____
E. Expenditures of out-of-County full-time employees spent in County on non-housing items	Obtained as follows: Total number of out-of-County Full-time employees X $1000.00 / Part-time employees X $ 500.00 (#4 and 5 - survey)	$_____ $_____
F. Rental Expenditures by full-time college staff living in County	Total full-time staff living in County X County percentage who rent (Column B - Chart I) X County Median Rent X 12 months (Column C - Chart I)	$_____
G. Total employee expenditures in County	Computed as follows: D + E + F	$_____

on average, has 410 existing full-time equivalent jobs. This results in a finding of average total employment opportunities attributable to the college of 1,231 jobs in each sponsor area. Stated another way, on average, for each existing job at a community college, two additional jobs are created in a sponsor area.

SUMMARY

This project used the economic impact model developed and used in New Jersey and subsequently used in Kansas to estimate the economic impact of community colleges on their state and sponsor areas. Minor adaptations were made, primarily in the choice of multipliers and expenditure factors. Using 1986-87 data from each community college, calculations of each component of the model were performed resulting in the following findings.

The SUNY community colleges generate an economic impact in the state as follows:

- Nearly 700 million dollars of the state's economy is a direct result of spending by the SUNY community colleges, their students and their employees.
- A business volume or economic impact of nearly $1.5 billion was generated by expenditures of SUNY community colleges, their students and their employees.
- The ratio of total economic impact to total revenues from all sources is 2½ to 1.
- The ratio of statewide economic impact to state aid is 7.6 to 1.
- Nearly 42,000 jobs are attributable to the existence and expenditures of SUNY's community colleges.

The SUNY community colleges generate an average economic impact on their sponsor areas as follows:

- 89% of expenditures by community colleges, faculty and students is within their respective sponsor areas.
- Student expenditures account for 63%, college expenditures for 19% and employee expenditures for 18% of the direct economic impact.
- On average, nearly $20.5 million was spent by the community college, its employees and students within the sponsor area.
- On average, a business volume of nearly $37 million was generated within a sponsor area by the expenditures of the college, its students and employees.
- On average, the ratio of total economic impact to each dollar of sponsor revenue is 6 to 1.
- On average, the existence of the college accounts for over 1,200 jobs within each sponsor area.
- On average, for each existing job at a community college two additional jobs are created in the sponsor area.

The findings of a ratio of economic impact to state aid of 7.6 to 1 is very conservative compared to results of other state studies. The differences are primarily caused by use of smaller multipliers and conservative estimates of components of employee expenditures. Still the findings clearly demonstrate that the SUNY community colleges can be viewed as an economic entity, one that contributes to economic development much like other segments of the economy.

Readers must remember that the more important benefits, an enhanced life style and increased earning power associated with increased levels of education, have not been included in this study. The investment in developing human capital provides the most important return to the citizens of the state. Making higher education and technical skill training readily available to all citizens of New York State remains the main job of the

community colleges. That they also have a significant economic impact further reinforces the wisdom of public investment in this unique educational system.

SELECTED REFERENCES

1) Ryan, G. Jeremiah. The Direct Economic Impact of New Jersey's Community Colleges, Nova University, Ed.D. Dissertation, 1983, p. 57. ED 233774.

2) Brookdale Community College. Handbook for Conducting A State of the Economic Impact of A Community College. Lincroft, NJ: Office of Research and Development, 1983.

3) Caffrey, John and Isaacs, Herbert. Estimating the Impact of A College or University on the Local Economy. Washington, D.C.: American Council on Education, 1971.

4) 1987 Survey of Buying Power, Sales and Marketing Management, October 1987, Vol. 139, #6.

5) 1985-86 New York State Statistical Yearbook, 12th Edition. Albany, NY: The Nelson Rockefeller Institute of Government, State University of New York.

6) Kansas Council of Community College President, The Economic Impact of the Kansas Community Colleges on the Counties and State of Kansas, Fiscal 1983-84. Overland Park, KS: Office of Institutional Research, Johnson County Community College, January 1985.

7) Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System. Washington, D.C.: U.S. Department of Commerce, Bureau of Economic Analysis, U.S. Government Printing Office, May 1986.

APPENDICES

APPENDIX A - Survey Form

APPENDIX B - Employee Factor Reference Chart I

APPENDIX C - Calculation Guide for Statewide Impact

APPENDIX D - Calculation Guide for Sponsor Area Impact

APPENDIX A

SUNY COMMUNITY COLLEGES

ECONOMIC IMPACT STUDY

SURVEY FORM

November 18, 1987

Based upon the request of the Presidents for an economic impact study, the Two-Year College Development Center is working with the SUNY Office of Community Colleges and an advisory committee of campus-based administrators to bring it about. This survey form requests data that will enable a statewide and local economic impact to be estimated. The model for this study was developed by Dr. G. Jeremiah Ryan, Vice President for Institutional Advancement, Monroe Community College, and has been used in New Jersey and Kansas. Directions and suggested sources of information are provided for each item to facilitate the process.

We hope all community colleges will participate so that the results will have maximum utility. We plan to have a published report available in February. In addition to the state-wide report, each college will be provided with its local sponsor impact results from which a local impact study could be written.

Please return the completed form by December 7, 1987 to: Dr. Thomas S. Kubala, Office of Community Colleges, SUNY Central Administration, State University Plaza, Albany, New York 12246. Thank you.

College: _____

Sponsor County(ies): _____

Name/Title of Person Completing Survey: _____

_____

Phone Number: ( ) _____

Information Requested	Directions/Source of Information
1. College expenditures $_____	Includes total college expenditures for the fiscal year ending June 30, 1987, but <u>excludes</u> the following -- a. all salaries paid to employees b. all internal transfers (that are not then expended externally) c. all taxes <u>Source</u>: Use 1986-87 fiscal year audit or Fiscal Year 1987 HEGIS Financial Report, line for "total current fund operating expenditures and mandatory transfers," <u>minus</u> exclusions listed above, and add expenditures for building projects, capital, etc.
2. Total Student Activity Expenditures: $_____	Includes athletic expenditures and programs generated by fees, admissions and fund-raising activities of clubs and organizations. Source should be Student Activities Office.
3. Percentage of college expenditures spent -- a. in sponsor area: _____% b. in New York State: _____% c. out-of-state: _____%	There are two methods of deriving this information from college business records: Identify expenditures by addresses of vendors. 1. calculate actual total expenditures in county(ies) of the college's sponsor area, in New York State and out-of-state for fiscal 1986-87. -OR- 2. examine three months of activity (in three different quarters) to determine average percentage spent in sponsor area, in State and out-of-state.

Information Requested	Directions/Source of Information
4. Number of college employees -- a. full-time: _____ b. part-time: _____ c. TOTAL NUMBER: _____ d. FTE for above: _____	Use end of 1986 calendar year payroll records, W-2 submissions, or 1986-87 annual budget and data to determine all college employees during 1986. Include all employees, professional and non-professional.
5. College employees who live -- in sponsor county(ies): a. full-time: _____ b. part-time: _____ c. TOTAL: _____ in State: a. full-time: _____ b. part-time: _____ c. TOTAL: _____	Use address information on payroll records or in college directory. If data on part-time employees are not available, assume the same percentage of part-time employees live in the county sponsor area, and in New York State as full-time employees do.
6. Total disposable income available to college employees $ _____	Use appropriate college records to determine total money paid directly to all college employees, <u>including</u> payments/deductions for employee benefits but <u>excluding</u> all taxes withheld (i.e., city, state, federal, Social Security) and all mandatory retirement deductions.
7. Number of students -- a. full-time: _____ b. part-time: _____ c. TOTAL: _____	This should be available on HEGIS forms, state reports and/or internal audits. Identify both full-time and part-time students defined as follows: a. full-time student-enrolled in 12 or more credit hours b. part-time students – enrolled for less than 12 credit hours

Information Requested	Directions/Source of Information
8. Average annual college-related expenditures by full-time students $_____	Use financial aid schedules for the 1986-87 academic year used to determine nine-month living allowances and book costs for a single, dependent, full-time student living at home. Exclude costs of tuition and fees.
9. Average annual college-related expenditures by part-time students $_____	Use the same financial aid schedule specified in #8 above to determine the nine-month costs only for books, college-related supplies and transportation to and from classes for a part-time student (6 credit hours). Exclude cost of tuition and fees.
10. Revenue from students: $_____ Revenue from sponsor: $_____ Chargeback revenue: $_____ State aid: $_____ Revenue from other sources within the State: $_____ Revenue from out-of-state sources: $_____	Available from appropriate 1986-87 college records.

Thank you for your cooperation.

APPENDIX B

Employee Factor Reference Chart I

	A Non-housing In-County Estimates	B County Percentage Who Rent	C County Mean Rent
New York State		51.4%	$210
New York City:	36.9%	76.6%	214
Bronx	23.9%	85.4%	195
Kings	29.9%	76.6%	198
New York	57.2%	92.2%	239
Queens	26.7%	61.9%	152
Richmond	25.7%	39.1%	229
Rest of State		31.5%	199
Albany	61.4%	43.9%	187
Allegany	38.6%	25.5%	134
Broome	48.2%	34.6%	175
Cattaraugus	41.7%	26.4%	132
Cayuga	41.8%	28.9%	160
Chautauqua	41.5%	29.2%	151
Chemung	54.7%	30.5%	164
Chenango	38.3%	25.5%	154
Clinton	53.2%	36.6%	175
Columbia	35.7%	29.7%	156
Cortland	47.4%	35.7%	164
Delaware	50.7%	25.9%	150

Column A - Effective Buying Income (or disposable income) ÷ Total Retail Sales per County
Source: S & MM/1987 Survey of Buying Power

Column B - Percent of Renter-Occupied Housing Units
Source: New York State Statistical Yearbook 1985-86

Column C - Average Rent per County
Source: New York State Statistical Yearbook 1985-86

	A Non-housing In-County Estimates	B County Percentage Who Rent	C County Mean Rent
Dutchess	39.8%	33.5%	223
Erie	44.8%	37.4%	155
Essex	40.1%	25.6%	153
Franklin	50.5%	29.7%	134
Fulton	39.0%	28.3%	123
Genesee	42.5%	26.7%	176
Greene	45.6%	27.2%	158
Hamilton	33.3%	18.2%	123
Herkimer	35.9%	28.4%	123
Jefferson	57.5%	31.6%	151
Lewis	26.3%	19.7%	125
Livingston	33.5%	27.5%	172
Madison	34.3%	25.8%	164
Monroe	44.2%	36.7%	211
Montgomery	43.0%	33.1%	106
Nassau	48.3%	21.1%	313
Niagara	38.2%	31.2%	163
Oneida	48.5%	34.7%	150
Onondaga	47.6%	38.2%	185
Ontario	49.5%	26.9%	187
Orange	48.1%	34.3%	213
Orleans	24.4%	25.2%	165
Oswego	29.1%	26.9	169
Otsego	40.7%	28.9%	160
Putnam	25.3%	20.4%	281
Rensselaer	31.3%	36.8%	152
Rockland	30.8%	29.1%	295
St. Lawrence	41.2%	28.2%	149
Saratoga	33.1%	27.4%	187

	A Non-housing In-County Estimate	B County Percentage Who Rent	C County Mean Rent
Schenectady	49.5%	33.1%	170
Schoharie	39.5%	23.9%	159
Schuyler	22.4%	19.8%	154
Seneca	27.8%	24.5%	168
Steuben	36.6%	25.3%	154
Suffolk	41.5%	20.1%	297
Sullivan	47.1%	31.8%	180
Tioga	21.6%	20.3%	157
Tompkins	38.1%	44.8%	209
Ulster	39.6%	31.3%	197
Warren	77.4%	31.9%	165
Washington	33.1%	24.6%	147
Wayne	23.2%	23.4%	172
Westchester	41.9%	47.6%	267
Wyoming	33.9%	24.2%	153
Yates	30.4%	23.6%	153

APPENDIX C

CALCULATIONS OF ECONOMIC IMPACT - STATE

Data Items	Procedures	Estimate
A. Student activity expenditures spent in State	Found by applying percentage computed in #3b to total reported in #2 (on survey).	$_____
B. College expenditures spent in State	Found by applying percentage computed in #3b to total reported in #1 (on survey).	$_____
C. Total in-State expenditures by College	Computed by adding A and B.	$_____
D. Employee non-housing expenditures	Obtained as follows:	
	Disposable Income (#6 - Survey) X Percentage of in-State Staff (#5 - Survey) X Average percentage of non-housing expenditures by county (Use Column A, Chart I)	$_____
E. Expenditures of out-of-State full-time employees spent in County on non-housing items	Obtained as follows:	
	Total number of out-of-State full-time employees X $1,000	$_____
Part-time	Total number of part-time out-of-State (#4 and 5 - Survey) X $ 500	$_____
F. Rental Expenditures by full-time college staff living in State	Computed as follows:	$_____
	Total full-time staff living in State X Percentage who rent (Use County % Column B - Chart I) X Median rent X 12 months (Use Column C - Chart I)	
G. Total employee expenditures in State	Computed as follows:	
	D + E + F	$_____

Data Items	Procedures	Estimate
H. Total student expenditures in State	Same figure as in-County; use Student Expenditures from J, Local Sponsor Calculation	$_____
I. Total direct economic impact of the College on the State	C + G + H	$_____
J. Multiplier Effect	State-wide multiplier - 2.1	2.1
K. Total Estimated Economic Impact	I X J	$_____
L. FTE living in State - (as reported in #4 on survey form)		_____
M. Jobs related to the College	I X .0000401	_____
N. Total full-time employment related to the College	L + M	_____

Adapted from: Handbook for Conducting A Study of the Economic Impact of A Community College, Brookdale Community College, Lincroft, New Jersey, 1983.

Data Items	Procedures	Estimate
H. Total expenditures by full-time students	Computed by the following method: 7a X 8 (on survey)	$_____
I. Total expenditures by part-time students	Computed by the following method: 7b X 9 (on survey)	$_____
J. Total expenditures by students	Computed by adding H and I	$_____
K. Total initial economic impact of the College on the County	C + G + J	$_____
L. Multiplier Effect		1.8
M. Total Estimated Economic Impact	L X K	$_____
N. Full-time employees living in County	(FTE) (on survey)	_____
O. Total initial economic impact of the College in the County	K	$_____
P. Jobs related to the College	K X .0000401	_____
Q. Total full-time employment related to the College	N + P	_____
R. Ratio of sponsor contribution to total economic impact	M + sponsor + chargeback revenues	_____

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Adapted from: Handbook for Conducting A Study of the Economic Impact of A Community College, Brookdale Community College, Lincroft, New Jersey, 1983.